

The month began with a disturbance over Newfoundland that moved rapidly eastward and on the 3d was apparently in the vicinity of the south coast of Iceland.

Charts VIII to XI cover the period from the 3d to 6th, inclusive, when extremely stormy conditions prevailed over a large portion of the ocean.

On the 8th a well-developed Low was central near 50° N., 42° W., and gales of force 8 to 12 prevailed between the 40th and 50th parallels and the 30th and 45th meridians. This Low moved rapidly northeastward, decreasing in intensity, and on the 9th and 10th moderate weather was the rule over nearly the entire ocean, although on the 9th the station at Horta reported a southerly wind, force 8, with rain.

From the 11th to 13th, inclusive, a depression accompanied by moderate to strong gales was over the region between the Azores and 50th parallel and the 20th and 45th meridians.

On the 14th and 15th reports of winds of force 7 to 9 were received from vessels in various parts of the ocean, while over large areas moderate weather prevailed.

From the 16th to 18th a slow-moving disturbance covered the middle section of the steamer lanes, the storm area extending from the 35th to 50th parallels and the 30th to 60th meridians. On the 18th there was also a well-defined Low over the western part of the Gulf of Mexico which moved rapidly northeastward along the coast, and on the 19th was central near Savannah. On both dates westerly to northwesterly winds of force 7 to 9 occurred in the Gulf, which is unusual, as cyclonic winds of gale force are rare in this region during the winter.

On the 20th an area of high pressure was over the province of Quebec, with its crest near Father Point, where a barometric reading of 30.94 inches was recorded. On the same day a Low was centered over Chesapeake

Bay, and the stations at Nantucket and Atlantic City both reported northeast wind, force 10, accompanied by snow.

On the 21st and 22d the eastern section of the steamer lanes was covered by a deep depression, and northwesterly gales of force 8 to 11 were encountered east of the 40th meridian.

From the 23d to 25th there was considerable cyclonic activity over the middle section of the ocean, and on the 23d and 24th northerly to northeasterly gales were encountered between the 20th meridian and coast of Scotland.

From the 26th to 28th there ensued another period of heavy weather in the eastern section, the storm area on the 26th and 27th extending as far west as the 40th meridian, while on the 28th it was restricted to the region between the 45th and 50th parallels and the 0 and 20th meridians, west longitude. On the 26th Nantucket was near the center of a Low that moved rapidly eastward, and on the 27th was near 43° N., 52° W. On both dates southerly gales were encountered in the easterly quadrants.

NOTE.—Capt. David Pearson of the American Steamship *Sudawsonco*, has furnished the following note regarding meteorological phenomena observed by him on February 15, 1927, in latitude 45° 25' N. and longitude 35° 30' W.:

I observed three whirlwinds within a radius of 10 miles; two were close together, while the third was northwest about 4 miles. The two that were close together were within 1½ miles of the ship. They were revolving from left to right and working their way from the southward to windward almost in the face of a northwest gale of force 9. The progressive speed of the whirlwinds I should judge was about 8 miles per hour and the vortices anything up to hurricane force, at times almost forming a waterspout. Our barometer read at the time 29.60 inches.

OCEAN GALES AND STORMS FEBRUARY, 1927

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
			° ' "	° ' "				Inches					
Maine, Dan. S. S.	Baltimore	Bremen	38 12 N.	62 46 W.	Feb. 2.	2 p., 2.	Feb. 3.	29.80	SW	W. —	NW	WNW, 10	SW.-NW.
München, Ger. S. S.	New York	Queenstown	48 43 N.	31 12 W.	3	Mdt. 3	5	29.43	SSW	SSW, 11	W	SW, 12	SSW.-S.-SW.
Nevada, Dan. S. S.	do.	Copenhagen	58 48 N.	14 13 W.	3	6 a., 3.	3	29.02	WSW	WSW, 10	WNW	—, 10	WSW.-WNW.
Pres. Harding, Am. S. S.	Queenstown	New York	46 36 N.	46 32 W.	1	8 a., 3.	6	28.72	SW	SW, 11	NW	W, 12	SW.-NW.
Mjldrecht, Du. S. S.	Seville	do.	37 20 N.	67 25 W.	2	1 a., 4.	4	29.62	SSW	SSW, 10	N	NW, 12	SSW.-NW.
Houstonic, Br. S. S.	Baytown, Tex.	London	34 43 N.	55 27 W.	4	6 p., 4.	6	29.60	SW	WSW, 8.	NW	WSW, 9.	SW.-WSW.
Oxonian, Br. S. S.	Glasgow	Louisburg, N. S.	51 00 N.	37 00 W.	4	2 a., 4.	4	28.83	SSE	SW, 12.	SW	SW, 12.	SE.-SW.
Do.	do.	do.	50 30 N.	40 00 W.	5	9 a., 5.	6	28.56	S	SE, 10.	NW	SW, 12.	SE.-SW.
West Celina, Am. S. S.	Norfolk	Bremen	41 35 N.	32 50 W.	6	Noon, 6.	6	30.00	S	S, 10.	NW	S, 10.	S.-NW.
Missouri, Br. S. S.	Plymouth	New York	46 50 N.	37 00 W.	7	6 p., 7.	8	29.92	S	S, 10.	W	S, 10.	S.-SW.
Houstonic, Br. S. S.	Baytown	London	41 17 N.	41 12 W.	7	11 a., 8.	8	29.65	S	S, 10.	WNW	S, 10.	S.-WNW.
Illinois, Am. S. S.	Port Arthur	Stockholm	41 54 N.	44 56 W.	7	4 a., 8.	8	29.40	SW	NW, 10.	NW	NW, 11.	SW.-N.-W.
Tomalva, Am. S. S.	Antwerp	New York	46 31 N.	34 42 W.	8	—, 8.	8	29.55	SSW	S, 9.	W	SSW, 10.	S.-W.
West Madaket, Am. S. S.	Liverpool	Mobile	39 00 N.	29 40 W.	10	9 p., 10	11	29.71	SW	SW, —	WNW	WNW, 9.	SW.-WNW.
Sacandaga, Am. S. S.	New York	Antwerp	47 10 N.	34 38 W.	11	5 p., 11	12	29.62	SSW	SSW, 10.	W	W, 11.	SSW.-W.
Iowa, Fr. S. S.	Havre	Port de France.	44 20 N.	22 11 W.	11	5 p., 11	11	29.62	NNW	NNW, 10.	NW	NNW, 10.	Steady.
St. Andrew, Br. S. S.	Galveston	Bremen	42 40 N.	41 55 W.	12	3 a., 13.	13	29.16	N	—	WNW	N, 10.	E.-N.-WNW.
Nieuw Amsterdam, Du. S. S.	Rotterdam	Halifax	47 46 N.	24 28 W.	13	6 p., 13.	14	28.76	ESE	SSW, 6.	WNW	NW, 10.	ESE.-S.-NW.
Stockholm, Swed. S. S.	Gothenburg	New York	55 30 N.	29 42 W.	14	8 a., 15.	15	29.27	SSE	SSW, 9.	WSW	SW, 10.	SSE.-WSW.
Maine, Br. S. S.	Antwerp	do.	43 35 N.	49 01 W.	16	11 p., 16.	17	29.11	NNW	NNW, —	NNW	NW, 10.	S.-NW.
Stockholm, Swed. S. S.	Gothenburg	do.	49 12 N.	43 00 W.	17	4 p., 17.	18	29.30	ENE	NNE, 10.	NW	N, 11.	ENE.-N.-NW.
Gulfking, Am. S. S.	Savannah	Port Arthur	27 45 N.	89 00 W.	18	10 p., 18.	19	29.60	N	—, 8.	N	W, 9.	W.-WNW.
E. J. Sadler, Am. S. S.	Balboa	New York	22 00 N.	84 00 W.	19	2 a., 19.	19	29.88	SW	SW, 7.	SW	W, 9.	Steady.
Sinsinawa, Am. S. S.	Gibraltar	do.	38 35 N.	72 20 W.	19	7 a., 19.	20	29.84	Var	NE, 5.	NE	NE, 10.	Do.
Minnehaha, Am. S. S.	New York	London	39 56 N.	70 38 W.	19	Mdt. 20.	20	29.94	NE	ENE, 8.	ENE	ENE, 10.	Do.
München, Ger. S. S.	Queenstown	New York	48 19 N.	34 18 W.	20	8 p., 20.	21	29.48	NW	NW, 6.	WNW	NW, 11.	SW.-NW.
Mascanamo, Ger. S. S.	Houston	Land's End.	43 35 N.	32 00 W.	20	6 a., 21.	22	29.57	W	NW, 11.	W	NW, 11.	SW.-NW.
West Hardaway, Am. S. S.	London	Pensacola	45 26 N.	18 26 W.	21	3 p., 21.	22	29.02	SW	NW, —	W	NNW, 12.	SW.-NW.
See City, Am. S. S.	Antwerp	New York	49 12 N.	14 35 W.	21	Mdt. 21.	27	28.86	S	NW, 9.	NW	NNW, 12.	SSW.-NW.
Emanuel Nobel, Belg. S. S.	London	New Orleans	43 00 N.	22 30 W.	23	8 p., 23.	26	29.34	W	SW, 8.	SW	W, 10.	SW.-WSW.
Bloomfield, Br. S. S.	Rouen	Baton Rouge	43 07 N.	22 48 W.	25	6 p., 25.	27	29.71	SW	SW, —	NW	—, 11.	SW.-NW.
Am. Banker, Am. S. S.	New York	London	40 46 N.	64 10 W.	26	4 p., 26.	27	29.24	SE	SE, 10.	W	SE, 10.	S.-SW.-W.
Mascanamo, Ger. S. S.	Houston	Land's End.	48 44 N.	11 55 W.	26	9 a., 26.	27	28.48	S	SW, 10.	W	W, 12.	S.-SW.-W.
Japanese Prince, Br. S. S.	Suez	New York	40 03 N.	29 31 W.	23	11 p., 26.	Mar. 1.	28.87	SW	SW, 12.	WNW	SW, 12.	SW.-W.-NW.
Westland, Am. S. S.	Manchester	Mobile	45 10 N.	15 38 W.	27	4 p., 27.	Feb. 28.	28.82	SW	—, 12.	N	—, 12.	W.-NW.
Innoko, Am. S. S.	Rotterdam	New York	49 53 N.	5 00 W.	27	Noon, 28.	Mar. 1.	28.94	SSW	SW, 9.	WNW	SW, 10.	SW.-WSW.

Ocean gales and storms, February, 1927—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH PACIFIC OCEAN													
Las Vegas, Am. S. S.	Pacific coast.	Yokohama.	51. 11 N.	170 30 W.	Jan. 30.	4a., 30.	Feb. 2.	28.69	W.	SW., —	WSW.	—, 9.	SSW.-WSW.
Pawlet, Am. S. S.	Manila.	San Francisco.	42 00 N.	138 00 W.	Feb. 1.	2a., 2.	2.	29.18	SSE.	S., 11.	W.	S., 11.	4 pts.
Waitemata, Br. S. S.	Westport, N. Z.	Vancouver.	39 00 N.	135 54 W.	1.	4a., 2.	3.	29.15	S.	S., 8.	W.	W., 9.	S.-WNW.
Grootendijk, Du. S. S.	Portland.	San Francisco.	42 19 N.	124 44 W.	1.	8p., 2.	3.	29.58	SSW.	SSE., 9.	SW.	SSE., 9.	S.-SSE.
Kaisho Maru, Jap. S. S.	Muroran.	William Head, B. C.	49 41 N.	132 49 W.	1.	3a., 1.	3.	28.83	NE.	NW., 5.	S.	S., 9.	
Makiki, Am. S. S.	Seattle.	Honolulu.	39 32 N.	138 47 W.	2.	1a., 2.	2.	28.00	SW.	W., 9.	W.	W., 9.	SW.-W.
Steel Exporter, Am. S. S.	San Francisco.	do.	34 20 N.	133 20 W.	4.	5a., 5.	5.	29.62	S.	S., 7.	NNW.	S., 8.	
Pres. Jefferson, Am. S. S.	Seattle.	Yokohama.	52 00 N.	167 10 W.	5.	2a., 6.	6.	28.55	E.	N., 9.	NNW.	N., 9.	E.-NE.-N.
West Carmona, Am. S. S.	Hongkong.	San Francisco.	38 07 N.	172 27 E.	5.	12 M., 5.	6.	29.67	W.	WNW., 7.	WNW.	WNW., 9.	Steady.
Dilworth, Am. S. S.	Cebu, P. I.	Portland.	50 40 N.	152 00 W.	5.	6p., 5.	6.	28.95	ESE.	SE., 9.	SSW.	SE., 9.	ESE.-SE.
West Prospect, Am. S. S.	San Francisco.	Yokohama.	31 30 N.	159 40 E.	6.	6p., 6.	7.	29.57	SW.	SW., 8.	W.	W., 11.	SW.-W.
Bengal Maru, Jap. S. S.	Yokohama.	San Francisco.	36 30 N.	157 45 E.	6.	11p., 7.	8.	28.90	SE.	W., 9.	NW.	NW., 10.	W.-NW.
West Carmona, Am. S. S.	Hongkong.	do.	37 50 N.	175 12 W.	7.	11a., 7.	7.	28.93	NW.	W., 2.	N.	N., 9.	W.-NW.
H. T. Harper, Am. S. S.	Richmond, Calif.	Honolulu.	28 47 N.	146 00 W.	8.	5a., 10.	10.	29.68	SE.	SSE.—	NW.	SSE., 12.	SSE.-WNW.
Emp. of Canada, Br. S. S.	Yokohama.	Vancouver.	50 57 N.	155 04 W.	8.	8a., 10.	11.	29.12	SE.	SE., 7.	S.	E., 9.	SE.-ESE.
Pres. Wilson, Am. S. S.	Honolulu.	Kobe.	29 00 N.	176 23 W.	8.	3p., 9.	12.	29.75	SW.	WNW., 10.	W.	WNW., 10.	W.-NW.
Kiyo Maru, Jap. S. S.	Yokohama.	San Pedro.	40 01 N.	159 00 W.	10.	2a., 10.	10.	28.17	W.	W., 7.	W.	W., 10.	W.-WSW.
Koyu Maru, Jap. S. S.	Miike.	Grays Harbor.	50 35 N.	154 35 W.	10.	Noon, 11.	13.	28.04	E.	ESE., 8.	SE.	ESE., 9.	
Frank G. Drum, Am. S. S.	Gaviota.	Honolulu.	25 22 N.	148 57 W.	10.	6a., 10.	12.	29.72	SSE.	SW., —	NW.	NW., 10.	SW.-NW.
Robin Adair, Am. S. S.	San Francisco.	do.	34 20 N.	131 45 W.	12.	6p., 13.	17.	29.29	SSE.	SW., 10.	SW.	SW., 10.	S.-SW.
Kongoson Maru, Jap. S. S.	Yokohama.	San Francisco.	38 45 N.	154 45 E.	14.	4p., 14.	15.	29.76	W.	WNW., 10.	NW.	WNW., 11.	W.-WNW.
Do.	do.	do.	42 00 N.	165 30 E.	16.	8a., 17.	17.	29.32	E.	ENE., 10.	ENE.	ENE., 10.	E.-ENE.
Manukai, Am. S. S.	Honolulu.	do.	32 40 N.	134 30 W.	15.	Noon, 15.	15.	29.39	S.	S., 8.	S.	S., 8.	Steady.
Memphis City, Am. S. S.	San Pedro.	Yokohama.	30 57 N.	133 00 W.	13.	1p., 13.	17.	29.60	W.	W., —	WNW.	W., 10.	
Canad. Seigneur, Br. S. S.	Vancouver.	Baiboa.	37 05 N.	123 12 W.	15.	Mid., 15.	16.	29.48	SE.	SE., 7.	S.	SSW., 8.	SE.-SSW.
Pres. Wilson, Am. S. S.	Honolulu.	Kobe.	32 40 N.	167 00 E.	13.	6p., 13.	16.	29.82	WNW.	WNW., 8.	NNE.	NW., 11.	WNW.-NW.
Manulani, Am. S. S.	San Francisco.	Honolulu.	29 39 N.	143 35 W.	16.	2p., 16.	17.	29.60	S.	S., 7.	W.	W., 9.	S.-SSW.
Bengal Maru, Jap. S. S.	Yokohama.	San Francisco.	39 05 N.	152 00 W.	17.	2a., 17.	18.	28.74	SSW.	S., 11.	WSW.	SW., 11.	S.-SW.-W.
West Chopaka, Am. S. S.	Hondagua.	do.	44 23 N.	147 55 W.	16.	7a., 18.	18.	28.37	W.	SW., 10.	NNW.	SW., 11.	Steady.
Oridono Maru, Jap. S. S.	Miike.	Grays Harbor.	48 14 N.	135 30 W.	18.	4a., 20.	20.	28.29	ENE.	SW., 8.	WSW.	SW., 8.	S.-SW.
Unkia Maru, Jap. S. S.	Muroran.	Portland.	44 20 N.	158 38 E.	23.	6a., 24.	24.	28.38	E.	ENE., 9.	N.	ENE., 9.	E.-N.
Kongoson Maru, Jap. S. S.	Yokohama.	San Francisco.	44 25 N.	146 15 W.	23.	4p., 24.	25.	29.20	NW.	NW., 8.	W.	SSW., 10.	NW.-W.
West Ivan, Am. S. S.	Hongkong.	do.	39 00 N.	177 00 W.	25.	11a., 25.	25.	29.44	W.	W., 8.	SW.	W., 8.	4 pts.
Havre Maru, Jap. S. S.	Muroran.	Tacoma.	49 57 N.	143 10 W.	24.	6a., 24.	25.	28.57	E.	SSE., 9.	SW.	SSE., 9.	6 pts.
City of Spokane, Am. S. S.	Yokohama.	Seattle.	49 46 N.	137 55 W.	24.	3p., 24.	26.	28.74	SE.	SE., 9.	SE.	SE., 10.	SE.-WSW.
Cuprum, Am. S. S.	do.	Puget Sound.	50 00 N.	146 00 W.	24.	10a., 24.	26.	28.82	SW.	W., 5.	W.	SE., 10.	
Yankee Arrow, Am. S. S.	Hongkong.	Los Angeles.	36 38 N.	161 43 E.	26.	8a., 27.	27.	29.42	SSE.	SW., 6.	W.	SE., 9.	SW.-W.
Harold Dollar, Br. S. S.	Karatsu.	San Francisco.	42 30 N.	155 00 E.	27.	3p., 28.	28.	28.99	W.	W., 9.	W.	W., 9.	Steady.
SOUTH ATLANTIC OCEAN													
Stakesby, Br. S. S.	Gulfport.	River Plate.	31 15 S.	49 50 W.	1.	3a., 2.	3.	29.50	NE.	S., 9.	S.	S., 10.	NW.-S.
Alchiba, Du. S. S.	Rotterdam.	Rosario.	28 30 S.	46 07 W.	2.	4p., 2.	4.	29.53	SW.	SW., 8.	SW.	SW., 8.	NW.-SW.

NORTH PACIFIC OCEAN

By WILLIS E. HURD

The average of the daily barometric readings for the month over the eastern half of the North Pacific Ocean shows a sharp fall in pressure since January, when the minimum in the Aleutian area was 29.53 inches, occurring at St. Paul. The point of lowest February pressure was at Dutch Harbor, its average of 29.19 inches being the lowest for that month in recent years, although that for February, 1926, was only 0.01 inch higher. The highest daily reading at Dutch Harbor for February of this year was very low for a maximum, only 29.92 inches. The fact that the pressure was below normal from the Arctic Ocean to the Hawaiian Islands and thence eastward to a little south of San Francisco shows that the Aleutian

Low was unusually deep and extensive and that for the most part it dominated the weather of the upper two-thirds of the eastern part of the ocean, beside forcing the usual northern limit of the northeast trade winds considerably to the southward.

The North Pacific HIGH, as a consequence of the overdevelopment and extent of the LOW, was at several times during the month practically nonexistent except as a narrow belt extending along low latitudes. From the 6th to the 12th it covered the usual area between Hawaii and the American continent and even extended well up along the Alaskan coast, but it was not otherwise well developed until near the end of the month when, for the first time in any great measure, the LOW retreated and the HIGH covered the major part of the ocean east of the 180th meridian.